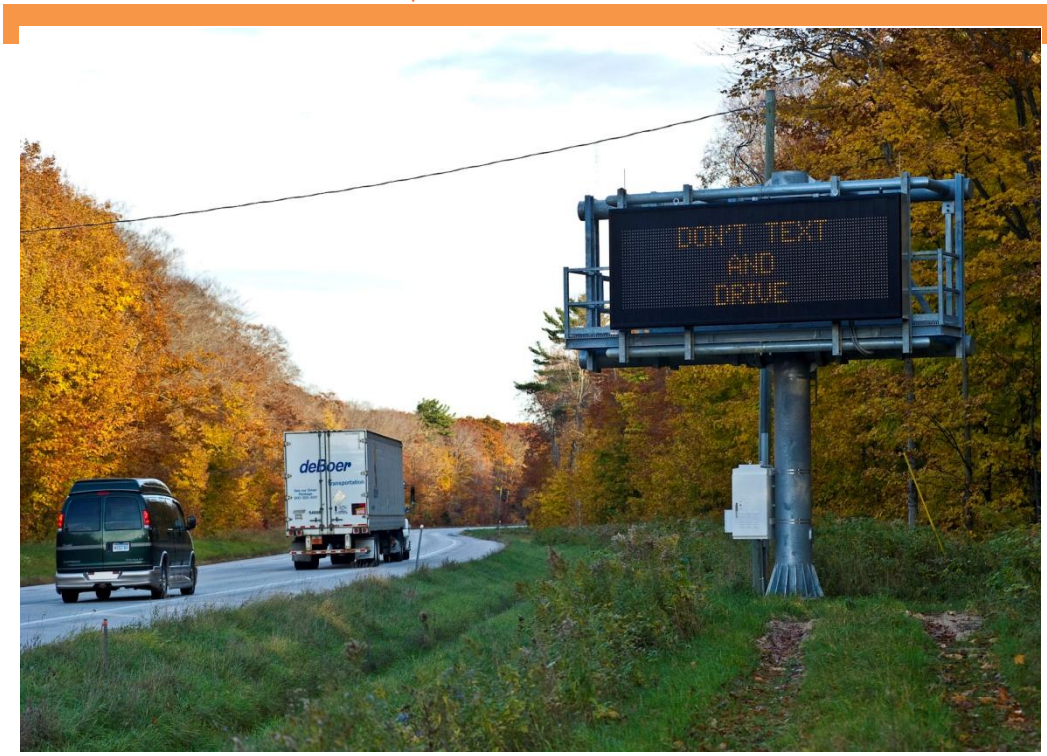

The Intelligent Traveler

October 2012

INTELLIGENT TRANSPORTATION SYSTEMS - ITS

A Program Office Update

By: Matt Smith, MDOT ITS Program Manager

Thank you for taking the time to read these updates from the Intelligent Transportation Systems (ITS) section or the Michigan Department of Transportation (MDOT). We hope you find the information in our updates informative and useful. ITS represents some of the most innovative technological advancements available in the transportation industry, and MDOT is proud to remain a national leader in these deployments. We are excited in the potential these advancements show in improving the safety and efficiency of our transportation network and processes.

The group has been busy over the past 12 months supporting regional ITS deployments and developing potential future applications of technology in solving transportation problems. I have tried to capture some of the larger initiatives currently being undertaken by MDOT's ITS Program Office staff.

Connected Vehicles

Connected Vehicle technologies represent a major shift in approaches to transportation safety and management. MDOT's ITS Program Office staff has been working with staff in the Systems Operations and Maintenance section, the Metro and University regions, the U.S. DOT, and a variety of other public and private entities, to advance this technology. Two of the higher-profile initiatives have been the Safety Pilot Model Deployment and the Data Use Analysis and Processing (DUAP) project.

The Safety Pilot Model Deployment has recently garnered a lot of national attention with the official kickoff of a real-life trial in Ann Arbor having almost 3,000 vehicles equipped with connected vehicle technologies in real-life traffic conditions. Staff from the ITS Program Office and the University Region are supporting this effort by: installing roadside communication devices, using and processing data generated by the equipped vehicles, and providing program management support.

The DUAP project is looking at the business processes across the department (with a

FREQUENTLY USED WEB SITES

ITS PROGRAM OFFICE
- www.michigan.gov/its

CONNECTED VEHICLES
- www.michigan.gov/cv

MI DRIVE WEB SITE
- www.michigan.gov/drive

PREVIOUSLY APPROVED SPECIAL PROVISIONS
- http://mdotwas1.mdot.state.mi.us/public/specprov/

MDOT ITS PLANNING
- www.mdotitsplanning.com

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MDOT'S ITS MISSION:
"Develop and sustain a program at MDOT to improve safety, operational performance and integration of the transportation system utilizing Intelligent Transportation System technologies for economic benefit and improved quality of life."

focus on maintenance, traffic mobility and operations, and asset management), and is developing applications to assist these business processes using the data generated by Connected Vehicle technologies.

Road Weather Management

ITS deployments in the Superior and North regions have focused primarily on the deployment of Road Weather Information Systems (RWIS). Maintenance crews in these areas have used a combination of roadside detectors, video cameras, data processing, road condition information and weather forecasting to develop a system for decision-making and winter maintenance activities. Based on the success of these programs, other regions have expressed an interest in implementing similar systems. The ITS Program Office in conjunction with management and Systems Operations staff, is conducting a comprehensive evaluation of RWIS deployments across the state, evaluating potential future technologies to improve Road Weather Management activities.

I-94 Truck Parking Pilot Deployment

Using a grant from the U.S. Department of Transportation, the ITS Program Office is implementing the pilot deployment of a truck parking information system along I-94 in the Southwest Region. This system will use a combination of field monitoring equipment, installed at public and private truck parking facilities, with in-vehicle communications devices to provide information on the availability of parking spaces. It is intended to prevent the commercial vehicles from parking along interchange ramps and freeway shoulders, creating a significant safety hazard. A highlight of this project is the cooperation and agreement between MDOT, private truck stop operators, and trucking companies.

Freeway Traffic Management

MDOT continues to improve and expand its freeway management capabilities across the state ("traditional" ITS!!). ITS deployments have been completed in almost every MDOT region. Deployments in the Southwest and Bay regions and the Ann Arbor area are nearing completion. Consistent control and operation of the system is being made possible through the completion of an Advanced Traffic Management System (ATMS) software. This system will operate traffic management devices across the state, and be used primarily by staff at the West Michigan Traffic Operations Center in Grand Region; the new Southeast Michigan Traffic Operations Center in Detroit; the Blue Water Bridge Traffic Operations Center in Port Huron; and the Statewide Traffic Operations Center in Lansing.

ITS advances will help improve the department's ability to safely operate the state's road network. We welcome your feedback. If you have any questions or comments, please do not hesitate to get in touch with us.

SEMTOC – Innovation in Detroit

By: Oladayo Akinyemi, Southeast Michigan Transportation Operations Center Manager

In June, the Southeast Michigan Transportation Operations Center (more commonly known as SEMTOC), relocated just a short jog across Lafayette Street in Detroit. With this new state-of-the-art facility, MDOT reiterated its commitment to providing the highest quality integrated transportation services in Michigan.

While SEMTOC's new facility provides a high tech environment with modern resources, our dedicated staff of well-trained industry professionals are the backbone of the operation. SEMTOC's primary objectives are:

Traveler Information

Control room staff responded to nearly 6,000 events impacting travel on southeast Michigan freeways in 2011, providing travelers and responders the information they need to avoid lengthy traffic delays.

Communications Hub

SEMTOC staff responded to about 70,000 inbound calls from other agencies, media, contractors and law enforcement in 2011.

Special Event Management

SEMTOC staff assisted in managing traffic plans developed for major special events such as the North American International Auto Show, Thanksgiving Day Parade and 4th of July fireworks.

Construction and Maintenance Coordination

1,769 construction and maintenance messages were posted to dynamic message signs in Metro Region in 2011.

Data Warehouse

Freeway data and SEMTOC operational reports can be found at www.michigan.gov/mdot.

Incident Response

Freeway Courtesy Patrol drivers assisted motorists by responding to more than 50,000 instances in 2011.

Each of SEMTOC's core competencies are exercised every day, some in plain sight and most behind the scenes, to produce a safe, responsive and reliable travel experience in southeast Michigan. Internal and external groups can schedule tours of the facility by contacting MDOT Traffic Operations Engineer Julie Vandermeer at 313-256-9800 x8239. Visit the Mi Drive Web site for real-time travel information at: www.michigan.gov/drive.

Driving the Innovative Way

By: The ITS Program Office

The future is here! Vehicles are talking with other vehicles and roadside devices to communicate information such as road surface conditions, traffic backups, emergencies, and upcoming hazards to drivers. All of the information being transmitted from vehicle-to-vehicle and vehicle-to-infrastructure helps assist the driver in making safe driving decisions. The information is also being communicated back to organizations like the Michigan Department of Transportation (MDOT) so it can make informed decisions on where to perform maintenance work, send emergency crews, and inform the public about potential hazards and alternative routes. What is this technology called? Connected Vehicles, an initiative headed by the U.S. Department of Transportation (USDOT) and MDOT's Intelligent Transportation Systems (ITS) Program Office.

The MDOT ITS Program Office has worked with industry partners to develop a Connected Vehicle driving simulator. The simulator, developed in 2010, gives the public a chance to preview up and coming Connected Vehicle Technology from the driver's seat of a virtual car. The simulator runs through several virtual scenarios where the driver gets to experience the potential computer interface systems that allow the driver to make informed decisions.

The Connected Vehicle driving simulator was first showcased by MDOT at the ITS Michigan Annual Meeting in 2010 and continues to be displayed at ITS conferences and vehicle technology conferences across the United States. As the vision of the USDOT Connected Vehicle Program has evolved, MDOT updates the Connected Vehicle driving simulator, ensuring it presents the most accurate representation of the program possible.

For more information about the program contact MDOT Connected Vehicle Technical Manager Collin Castle, P.E., at the ITS Program Office, or go to www.michigan.gov/cv. If you would like to have the simulator visit your conference or facility, please contact Collin Castle at CastleC@michigan.gov.

MDOT ITS Program Office
Michigan Department of Transportation
Construction and Technology Building
8885 Ricks Road
Lansing, MI 48909

Upcoming Events

TUE 02 OCT
2014 Detroit Technology Showcase Stakeholder Input Meeting
9:00 a.m. – 12:00 p.m.
Southeast Michigan TOC
1060 W. Fort Street
Detroit, MI 48217

TUE 09 OCT
Connected Vehicles Working Group
1:00 p.m. – 4:00 p.m.
Michigan International Speedway
12626 U.S. Highway 12
Brooklyn, MI 49230

THU 1 NOV
Michigan Transportation Engineering Conference
Location: TBD
*Visit the MiTEC Web site for details and registration information.

THU-MON 15-19 NOV
2012 AASHTO Annual Meeting
8:00 a.m. – 5:00 p.m.
Westin Convention Center
1000 Penn Avenue
Pittsburgh, PA 15222

SUN-THU 13-17 JAN
TRB 92nd Annual Meeting
Marriott Wardman Park Hotel
2660 Woodley Road Northwest
Washington, DC 20008

*If you have an event or an article that you would like included in future editions of *The Intelligent Traveler*, please contact the editorial staff.